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DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C.

DCI/IC 5375-82

REPLY TO
ATTN OF:

IN

SUBJECT: Technical Manpower Survey (Your Memo, 24 Feb 82)

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TO: Director, Intelligence Community Staff

1. Attached is the completed survey you requested on the recruitment and retention of scientific and engineering (S&E) personnel at the Air Force's Foreign Technology Division (FTD). Although your initial questionnaire only addressed civilian manpower, we included statistics on military manpower since 43% of FTD's S&E authorizations are military.
2. We share the DCI's concern about the intelligence community's current and projected ability to recruit and retain qualified technical manpower and are looking forward to the survey results and recommendations of his Science and Technology Advisory Panel.

JOHN B. MARKS, Maj Gen, USAF
Asst Chief of Staff, Intelligence

1 Atch
AF FTD Survey Response (C)

[JSAF review completed]

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CLASSIFIED BY ACS/I, HQ USAF
REVIEW ON: 6 Apr 1988
REASON: 2-301.c3

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-- FTD has established a Career Field Coordinating (CFC) Team for civilian S&Es. The team monitors the selection, placement, and training of S&Es. Recommendations are made by the team about improvements to the recruiting program, and recruiters are selected from the team.

-- FTD Actively participates in the college recruiting program for Air Force Systems Command (AFSC) activities at Wright-Patterson AFB. FTD senior S&Es interview graduating students at numerous universities. Information about FTD is provided to the schools before the recruiting trips. Based on recruiter recommendations, selected students are sent letters of invitation to visit FTD for further interviews. Interviews are set up for various work areas and a match is made between the interest of the graduates and FTD's needs. In addition, applications received by the AFSC and FTD Civilian Personnel Offices as a result of advertisements are reviewed and applicants interviewed.

-- Another source of engineers has been industry layoffs. In the Ohio area, the General Electric plant near Cincinnati laid off many engineers. A senior FTD engineer went to Cincinnati to interview prospects. Several were invited to FTD. As a result, three experienced engineers were hired.

-- Another special recruiting effort involves briefings on FTD's mission. This is one of the few ways that FTD can attempt to recruit military S&Es as well as civilians. Student chapters of engineering societies and ROTC units throughout the United States are briefed by a team of FTD officers on the FTD Story and the Soviet Technological Challenge in order to develop their interest in S&T intelligence analysis work and encourage them to seek FTD assignments.

-- Due to the recruiting efforts discussed above, FTD has hired 82 engineers in the past four years. FTD will have 34 more engineers assigned in 1982 than in 1978.

-- In addition to an aggressive recruiting program, the Office of Personnel Management (OPM) has authorized special salary rates for GS-5 through GS-11 engineers which permit beginning payments at step 10 of the regular schedule (approximately \$4,000 increase over step 1). Unfortunately, even these special salary rates are not comparable with the rates being offered for some skills in the private sector.

-- The Air Force is supporting a Navy legislative proposal to authorize the payment of a one-time recruiting bonus (\$10,000 maximum) to civilian federal employees who possess skills needed by the government, particularly scientific and engineering skills.

-- There is an accelerated training program which decreases the minimum time in grade requirement from one year to six months for the first promotion. Engineers can advance from the entry level (GS-5/7) to journeyman level (GS-12) in 2 1/2 to 3 1/2 years. In addition, experienced engineers can be hired at an advanced in-hire salary rate of the GS-12, e.g., step 5.

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-- Electronics engineers are the most difficult technical personnel to recruit. Chemists are the easiest to recruit.

-- There are several administrative requirements which impede hiring of technical personnel. Special security requirements create difficulties. Applicants must successfully pass a security interview before a job offer can be made. Then they must wait four to six months, or longer, before the full clearances are granted. FTD is competing with other organizations for scarce technical talent. These other organizations can make on-the-spot firm job offers. Another impediment is our lack of authority to cover expenses for bringing recent college graduates into FTD for interviews. Applicants must come at their own expense. Private industry typically covers all interview expenses of applicants. A third impediment is the grade level qualifications of recent college graduates who have no experience. The difference between qualifying for a GS-5 or a GS-7 using only their education is based on grade point average or class standing. Applicants from quality engineering schools with a 2.7 grade point average may have a better education than an applicant with a 2.9 average from a mediocre school. However, the 2.9 student received a GS-7 and the better educated student gets a GS-5. The salary difference between a GS-5 and a GS-7 is almost \$4,000.

III. (U) Retention

-- The attrition rate for Computer Scientists has been zero over the past three years. For Physical Scientists the attrition rate has been 3%. For Engineers, it has been 5%. These attrition rates are very low and compare favorably with the attrition rate of 5% for our other professional employees. Other technical organizations at WPAFB have about 10% attrition for their scientists and engineers.

-- Pay issues which could reduce the disparity between the private and public sectors are: (1) the continuing of advanced in-step pay rates for engineers, GS-5 through GS-11, and (2) relief from the current high grade (GS-13 and above) ceiling imposed by the Air Force Systems Command as a result of Department of Defense direction. Incentives include: the "hands on" engineering work opportunities at FTD which particularly appeal to college graduates; technical challenge of the reverse engineering process in S&TI analysis; the excellent educational opportunities in the Dayton area for obtaining advanced technical and management degrees as discussed under training below; and the lower cost of living in Ohio than in many other West and East Coast cities.

-- Job enrichment for technical personnel is accomplished by giving them full responsibility for specific technical areas. As a technical expert, they have the authority to speak for FTD to other federal agencies. They serve on many national level committees. They brief senior government officials at all levels of government.

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-- FTD has a dual ladder career program for civilian S&Es. One is the management ladder and one is the technical ladder. Technical personnel who wish to remain in non-management assignments have a career program that permit them to advance to a technical advisor, GS-15. Rotational assignments to technical positions in Germany and England are provided as well as rotational assignments within Hq FTD.

IV. Training

25X1

-- An FTD objective is the expansion of the professional capabilities of its scientists and engineers through every means available within its resources. Characteristic of FTD's commitment to professional development is the existence of its own formal Career Development Program. The overall goal of that program is to produce a management and technical work force capable of sustaining and improving the quality of the FTD product. In addition to its organizational goal, it is a "people" program. It provides development and career progression opportunities and the challenges and rewards of a healthy competitive atmosphere. The program is tailored to the organization's mission and manning needs, and is designed to realize work force development through a balanced mix of training and development activities in a multi-tiered approach.

TIER 1 is Career Field Development. Its goal is to develop the journey person work force and the technical experts so critical to FTD's mission success. It is an ongoing effort at FTD with responsibility in the hands of line management through the first level supervisor. All employees participate in this program.

TIER 2 is the Career Broadening Program. Its goal is to enhance and broaden the technical and managerial capabilities of competitively selected GS-12 through GS-14. For FY82, there are 57 participants, the great majority of which are S&Es.

TIER 3 is the Senior Development Program. Its goal is to further develop FTD senior managers and technical directors. For FY82, 26 participants were selected. Its members are at the GS-14 through SES level. Members are selected annually to participate.

-- Our S&T personnel receive OJT through journeyman level. Training is conducted by supervisors and experienced senior individuals. OJT includes job and unit orientations, hands-on training, job rotations, task group service, participation in committees, and special projects. Specific technical courses are brought in-house when requirements exist to train many people.

-- Our S&E personnel complete academic courses through local universities, short courses, symposia, seminars, professional society meetings, etc. FTD funds participation in long term full time study and research programs and every year has competition for Senior Service Schools and other graduate level career programs. FTD has the unique opportunity, being co-located with the Air Force Institute of Technology, to take advantage of many engineering short courses

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offered throughout the year. In FY81, 192 military and civilian personnel completed short courses there. FTD competes for the Director of Central Intelligence Exceptional Analyst Program and has had people selected each year. FTD personnel compete annually for rotational assignments with the Intelligence Community Staff and with the office of the Air Force, Assistant Chief of Staff, Intelligence (HQ USAF/INYS). We fill all quotas allocated FTD for the Defense Intelligence School and all other ATC courses. Orientation tours to Space, Missile, and Aeronautical test facilities and some industrial facilities are conducted.

-- All FTD S&E civilians are participants in the DOD-wide Civilian Career Program for General Intelligence Personnel and make use of the Master Plan for training and education needs of the individuals. These needs are met as opportunities occur. Training needs are determined by the supervisors and validated by upper levels of management. Requirements are integrated to the extent possible and are satisfied through in-house and local courses prior to going outside.

V. (C) Other

-- FTD has taken initiatives both in recruiting and retention which should improve its ability to fulfill technical manpower needs for the decade, provided continued assistance is given by higher authority in three areas. First, continued assistance is needed in the area of advanced in-hire salary rates for USAF engineers. We have them now and will need them continued indefinitely. Second, 25X1 current restrictions on the number of GS-13s and above should be relaxed. With FTD's expanding work force, it currently cannot promote all of those deserving to the GS-13 level. In 1976, FTD had [] grade positions in a work force of 1065. Effective October 1982, FTD will be authorized [] high grade positions in a work force of [] USAF 25X1. The increase in the work force has been almost all 25X1 S&Es. Additional S&E authorizations are programmed and expected each year USAF through 1987, so this problem will become more critical. Third, hiring freezes seriously impact college recruiting. These broad approaches to restricting government hiring, however temporary, disrupt planned recruiting efforts. In order to recruit S&E college graduates, FTD must make arrangements with the colleges a year ahead of time to do on-campus interviews. Hiring freezes put us in untenable situations with the colleges. In summary, with significantly reduced restrictions on high-grade positions, no arbitrary hiring freezes, a continuance of special pay rates for engineers, and implementation of recruitment bonuses, we would anticipate few difficulties in recruiting sufficient civilian technical personnel in the next decade. However, we expect that FTD, like most Air Force organizations, will continue to have a shortage of military S&E officers.

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